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ABSTRACT

This document reports on a study of the professional tasks of Wisconsin junfor-senior high school industrial arts teachers. It presents data which show the frequency with which the teachers perform their professional tasks and the importance which they attach to these professional tasks. The data are presented and analyzed in a series of tables and in two appendixes. These appendixes show the frequency and importance ratings assigned each first-level, second-level, and third-level task as reported by those teaching industrial arts subjects in junior-senior high schools in Wisconsin during the academic year 1971-72. Ranks in each appendix are assigned on the basis of the median value. The interquartile range given is a measure of agreement among those responding. These data are part of a larger study of junior, junior-senior, senior high school, and capstone teachers of industrial education subjects in Wisconsin for the purpose of re-evaluating the B.S., M.S., and Ed.S. degree programs in industrial education at the University of Wisconsin-Stout. (Author/DDO)

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STATEMENT OF THE PROBLEM

In these pages is reported a study of the professional tasks of Wisconsin junior-senior high school industrial arts teachers.

More specifically, data are presented in response to two questions:

1. With what frequency do Wisconsin junior-senior high school industrial arts teachers perform professional tasks?

2. What importance rating do Wisconsin junior-senior high school industrial arts teachers assign to professional tasks?

RELATION TO OTHER STUDIES

In August of 1972, a paper was prepared which reviewed the development of the task analysis studies at UW-Stout up to that point in time.[1]

Since this study is based upon that development, the following outline of it is presented for information:

Introduction
Need for Role Descriptions
Program Development Model
Position Paper Implications
Identification of Tasks
Development of Task Analysis
  Survey Instruments
Processing the Data

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[1] Lawrence S. Wright, Development of Task Analysis Studies in Industrial Education; Graduate College, University of Wisconsin-Stout, Menomonie, Wisconsin, August, 1972.

Also, in the summer of 1972, a study was completed by six graduate students at UW-Stout.[2] This paper examined the professional tasks of Wisconsin industrial arts teachers (1) who taught in any or all of grades 7, 8 and/or 9 whether they also taught in senior high school or not, (2) who taught in any or all of grades 10, 11 or 12 whether they also taught in junior high school or not, and (3) who taught Capstone industrial education courses.

In the belief that a more detailed study of those who taught only grades 7, 8 and/or 9; those who taught 7, 8 and/or 9 and 10, 11 and/or 12; and those who taught 10, 11 and/or 12 but not Capstone courses; and those who taught Capstone courses without regard to other levels at which they might be teaching; this study was undertaken.

This study is Part III in the following series:

Part I: Introduction to the Problem

Part II: Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior High School Industrial Arts Teachers

Part III: Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Junior-Senior High School Industrial Arts Teachers

Part IV: Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Senior High School Industrial Education Teachers

Part V: Frequency and Importance of Their Professional Tasks as Reported by Wisconsin Capstone Industrial Education Teachers

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[2]Daniel Fara, et. al., "Professional Tasks of the Wisconsin Industrial Education Teacher" (unpublished Plan B investigation, University of Wisconsin-Stout, 1972.)

Part VI: Frequency and Importance of Their Professional Tasks as Reported by All Wisconsin Secondary School Industrial Education Teacher Groups

Part VII: Significant Differences Between Selected Wisconsin Industrial Education Teacher Groups with Respect to (1) Frequency and (2) Importance of Their Professional Tasks

Part VIII: Importance of Industrial Education Teacher's Professional Tasks as Seen by a Jury of Selected Leaders in Education, Together with Significant Differences Between Responses of Selected Wisconsin Industrial Education Teacher Groups and the Jury

DISTRIBUTION OF JUNIOR-SENIOR HIGH SCHOOL INDUSTRIAL ARTS TEACHERS BY GRADE LEVEL

In the effort to learn at what grade level Wisconsin industrial education teacher-respondents were teaching, they were asked to respond to the following item:

> "Check each of the levels in which you are teaching one or more industrial education subjects this year":
>
> ___6th grade ___8th grade ___10th grade ___12th grade
>
> ___7th grade ___9th grade ___11th grade ___Capstone

Data presented in Table 1 are those related to the junior-senior high school grades. It may be noted that 153 or 54.2 percent of the junior-senior high school industrial arts teachers report teaching industrial arts courses in grades 9, 10, 11 and 12. (This may be the traditional four-year high school.) The next largest number--31, or 11.0 percent--teach industrial arts courses in each of the six grades 7 through 12. The distribution among other combinations of junior-senior high school grades may be seen in the table.

TABLE 1

Numbers and Percent of Wisconsin Junior-Senior High School Industrial Arts Teachers Who Reported Teaching One or More Industrial Arts Courses in Junior and Senior High School

Junior High School Grades	Senior High School Grades: 10		11		12		10 and 11		10 and 12		11 and 12		10, 11 and 12		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
7					1	0.4*	1	0.4					1	0.4	3	1.1
8			1	0.4							6	2.1	4	1.4	11	4.0
9	15	5.3	1	0.4	1	0.4	8	2.8	3	1.1	4	1.4	153	54.2	185	65.5
7 and 8	1	0.4									1	0.4	8	2.8	10	3.5
7 and 9													3	1.1		1.1
8 and 9	1	0.4					4	1.4			1	0.4	26	9.2	32	11.3
7, 8 and 9	1	0.4			1	0.4	2	0.7			3	1.1	31	11.0	38	13.5
Totals	18	6.4	2	0.7	3	1.1	15	5.3	3	1.1	15	5.3	226	80.2	282	100.0

*Table is read as follows: One junior-senior high school industrial arts teacher, or 0.4 percent, reported teaching industrial arts in grade 7 of the junior high school and in grade 12 of the senior high school during the 1971-72 academic year.

TEACHING EXPERIENCE

Respondents were asked to indicate within categories the number of years of teaching experience including the current year (1971-72). Data presented in Table 2 show a fairly uniform distribution within the categories ranging from 38 or 14.3 percent with more than 15 years to 68 or 25.5 percent with from 6 to 10 years of experience.

TABLE 2

Teaching Experience of 267 Wisconsin Junior-Senior High School Industrial Arts Teachers

Teaching Experience in Years	Number of Teachers	Percent
1 - 2	54	20.2
3 - 5	64	23.9
6 - 10	68	25.5
11 - 15	43	16.1
More than 15	38	14.3
Total	267	100.0

FREQUENCY RATINGS

Data are presented in Appendix A which show the frequency rating assigned each first-level, second-level and third-level task as reported by those teaching junior-senior high school industrial arts subjects in the 7th through 12th grade levels in Wisconsin during the 1971-72 academic year. These ranks are assigned on the basis of the median value. The interquartile range is a measure of agreement among those responding.

It may be of interest to note the ranking by junior-senior high school industrial arts teachers of the frequency with which they perform first-level tasks. (It may be recalled that these are cumulations of their responses to the third-level tasks). These data are presented in Table 3.

TABLE 3

Ranking of Frequency of First-Level Tasks by Junior-Senior High School Industrial Arts Teachers

Rank	Code Number	First-Level Task
1	5.0	Facilitate Learning
2	4.0	Nurture Humaneness
3	6.0	Manage Learning Environment
4	3.0	Design Instruction
5	9.0	Evaluate Instruction
6	1.0	Improve Individual's Competencies
7	10.0	Evaluate Programs
8	2.0	Design Programs
9	7.0	Provide Professional Service
10	8.0	Utilize Research

The summary of the distribution of frequency ratings by first-, second-, and third-level tasks may be seen in Table 4.

IMPORTANCE RATINGS

Data are presented in Appendix B which show the importance rating assigned each first-level, second-level and third-level task as reported by those teaching junior-senior high school industrial arts subjects in the 7th through 12 grade levels in Wisconsin during the 1971-72 academic year. The ranks assigned on the basis of the median value. The interquartile range is a measure of agreement among those responding.

TABLE 4

Interpretation of Median (Mdn) Values of Frequency Ratings by Wisconsin Junior-Senior High School Industrial Arts Teachers

Range of Median Values	Frequency Interpretation	Tasks					
		First-Level		Second-Level		Third-Level	
		N	%	N	%	N	%
4.500 and higher	Weekly or More Often	0	0	6	10.5	52	15.9
3.500 - 4.499	About Once per Grading Period (6-9 weeks)	3	30	14	24.6	72	22.0
2.500 - 3.499	About Once per Semester	4	40	17	29.8	87	26.6
1.500 - 2.499	About Once per Year	3	30	15	26.3	73	22.3
1.499 and lower	Do Not Perform	0	0	5	8.8	43	13.2

It may be of interest to note the ranking by junior-senior high school industrial arts teachers of the importance they attach to the first-level tasks. (It will be recalled that these are cumulations of their responses to the third-level tasks). Data are presented in Table 5.

The summary of the distribution of importance ratings by first-, second-, and third-level tasks may be seen in Table 6.

TASKS RECEIVING LOW RATINGS

An examination was made of the tasks which received low ratings. Low ratings for frequency were those reported as "do not perform" by the median value of the respondents. Low ratings for importance were those reported as "unimportant" or as "slightly important" by the respondents. These tasks are identified in Table 7.

TABLE 5

Ranking of Importance of First-Level Tasks by Junior-Senior High School Industrial Arts Teachers

Rank	Code Number	First-Level Tasks
1	6.0	Manage Learning Environment
2	5.0	Facilitate Learning
3	4.0	Nurture Humaneness
4	1.0	Improve Individual's Competencies
5	3.0	Design Instruction
6	10.0	Evaluate Programs
7	2.0	Design Programs
8	7.0	Provide Professional Service
9	9.0	Evaluate Instruction
10	8.0	Utilize Research

TABLE 6

Interpretation of Median (Mdn) Values of Importance Ratings by Wisconsin Junior-Senior High School Industrial Arts Teachers

Range of Median Values	Importance Interpretation	Tasks					
		First-Level		Second Level		Third Level	
		N	%	N	%	N	%
4.500 and higher	Essential	0	0	2	3.5	44	13.5
3.500 - 4.499	Very Important	8	80	35	61.4	162	49.5
2.500 - 3.499	Moderately Important	2	20	17	29.8	100	30.6
1.500 - 2.499	Slightly Important	0	0	3	5.3	19	5.8
1.499 - Lower	Unimportant	0	0	0	0	2	.6

TABLE 7

Tasks Receiving Low Frequency and/or Importance Ratings by Junior-Senior High School Industrial Arts Teachers

Code No.	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
2.3.1	Identify various group cultures that may compose target populations for programs	X	X
2.7.2	Consult with industrial and educational advisory board	X	
2.7.4	Maintain a program-level instruction evaluation log book	X	X
2.7.5	Prepare follow-up studies of graduates of the program	X	
2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change	X	
6.4.6	Keep records of federal and state funding programs	X	
7.1.10	Assist students in securing and filling out job applications	X	
7.2.3	Initiate and organize special community service committees as needed	X	X
7.2.4	Participate in school accrediation visits	X	
7.3.4	Sponsor student club activities	X	
7.5.1	Organize and conduct workshops and in-service educational programs	X	
7.5.2	Develop adult evening extension programs	X	
7.5.3	Initiate remedial and summer programs for students	X	

Code No.	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials	X	X
7.6.2	Write reviews of new tests, instructional aids, and media for education journals	X	X
7.6.3	Develop written instructional materials for publication	X	X
7.7.1	Provide student-teacher with orientation to the school, classroom and community	X	
7.7.2	Prepare the class for the arrival of student teachers	X	
7.7.3	Assign teaching responsibilities to student teacher	X	
7.7.4	Create situations so that the student teacher can initiate the instruction activities	X	
7.7.5	Hold conferences with student teacher regarding his performance, progress and problems	X	
7.7.7	Observe student teachers' performance in the classroom	X	
7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher	X	
7.7.9	Make formal evaluations of student-teacher's performance	X	
8.2.1	Develop a concise statement of the research problem		X
8.2.2	Write a rationale for a research study including a review of literature	X	X
8.2.4	Select and describe the research design to be used in a proposed research study	X	

Code No.	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
8.2.5	Select a population for a particular research study	X	X
8.2.7	Develop a management strategy for the control of the research study	X	X
8.2.8	Prepare a budget estimate in fiscal terms for a research study	X	
8.2.9	Submit research proposal to appropriate funding bodies	X	X
8.3.1	Collect research data by appropriate methods, e.g., historical, descriptive, experimental	X	
8.3.2	Analyze and interpret data collected for research studies	X	X
8.4.1	Complete preparation of preliminary draft of research report, e.g.: introduction, methods, body, conclusions, implications, bibliography, appendices	X	X
8.4.2	Formally review and revise preliminary draft of research report	X	X*
8.4.3	Complete final draft of research report	X	X
8.5.3	Organize and set-up pilot programs in cooperation with other researchers	X	
8.6.1	Read the research report and identify the major parts		X
8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study		X
8.6.3	Evaluate the sampling procedures of research reports	X	X
8.6.6	Evaluate the conclusions of a research report		X
9.2.8	Use computer to assist in analyzing test results	X	X*

Code No.	Task	Do Not Perform	Slightly Important
	THIRD-LEVEL TASKS		
9.3.1	Administer pre-tests and posttests	X	
9.3.5	Administer standardized tests	X	X
10.1.1	Conduct program-level follow-up study	X	
10.1.5	Select (or design) and administer tests of of psychomotor abilities for evaluation of programs	X	
10.1.6	Consult advisory committees to determine quality of instructional program	X	
	SECOND-LEVEL TASKS		
7.5	Develop programs of professional service	X	
7.6	Contribute to literature of the field through technical and/or professional writing	X	
7.7	Supervise student teachers	X	
8.2	Prepare proposals for researching a problem	X	X
8.3	Conduct proposed research		X
8.4	Write research reports	X	X
	FIRST-LEVEL TASKS		
	No first-level tasks were reported as "do not perform," "unimportant" or "slightly important."		

*This task was rated as "unimportant."

SUMMARY

Data has been presented which show the frequency with which Wisconsin junior-senior high school industrial arts teachers report that they perform their professional tasks.

Data has also been presented which show the importance which Wisconsin junior-senior high school industrial arts teachers attach to their professional tasks.

These data are part of a larger study of junior, junior-senior, senior high school and capstone teachers of industrial education subjects in Wisconsin for the purpose of re-evaluating the B.S., M.S., and Ed.S. degree programs in industrial education at UW-Stout.

APPENDIX A

FREQUENCY OF TASKS PERFORMED

Tasks of Wisconsin Junior-Senior High School Industrial Education Teachers Ranked by Median (Mdn) Value of Their Response to "Task Frequency" and Including Interquartile Range (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.365	1.668	5.0	FACILITATE LEARNING
1	4.591	1.447	5.3	Interact with students in a positive manner.
1	4.961	0.538	5.3.3	Express interest in students
2	4.894	0.605	5.3.8	Express enthusiasm for your students and the subject matter
3	4.758	1.504	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
4	4.741	0.947	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
5	4.692	1.096	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
6	4.648	1.199	5.3.2	Establish atmosphere for positive group interaction
7	4.500	1.307	5.3.4	Make provision for student input into instruction
8	4.041	1.657	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
9	4.000	2.108	5.3.5	Plan individualized instruction with students
10	3.941	1.551	5.3.6	Use student interests in planning student activity
11	2.277	2.802	5.3.9	Recognize and interact with subcultures unique to the student population
2	4.557	1.448	5.2	Motivate students.
1	4.894	0.605	5.2.2	Win the students' attention and maintain level of arousal
2	4.767	1.321	5.2.7	Recognize and react to behavior which merits no reward
3	4.730	0.948	5.2.8	Provide students immediate feedback to tests
4	4.565	1.193	5.2.3	Vary classroom routine to prevent monotony and boredom
5	4.541	1.138	5.2.6	Reward student achievement
6	4.521	1.046	5.2.5	Recognize and encourage evidences of response to internal motivation
7	3.687	1.946	5.2.4	Recognize and encourage evidences of response to external motivation
8	3.235	1.522	5.2.1	Determine the entering dispositions of individual students

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.225	1.516	5.5	Teach the substantive content of the field.
1	4.765	0.928	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g.: perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
2	4.205	1.331	5.5.1	Provide experiences which will contribute to the students' understanding of industry as a major element in our culture
3	4.033	1.516	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
4	3.966	1.692	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others
5	3.818	1.836	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
4	4.191	1.876	5.1	Execute instructional plans and strategies.
1	4.950	0.549	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
2	4.923	0.576	5.1.4	Present lessons and related demonstrations
3	4.568	1.207	5.1.1	Identify individual needs of students
4	4.263	1.170	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
5	3.794	1.512	5.1.6	Use educational resources in executing instructional plans
6	3.029	1.515	5.1.2	Find out what students expect from the instruction
7	2.346	1.723	5.1.7	Conduct field trips and other outside-class activities

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.989	1.907	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.653	1.276	5.4.3	Be sensitive to non-verbal feedback
2	4.541	1.687	5.4.1	Be sensitive to solicited and unsolicited student feedback
3	4.416	1.476	5.4.6	Capitalize on spontaneous student interests
4.5	4.027	1.441	5.4.2	Modify instructional methods in the light of student feedback
4.5	4.027	1.423	5.4.5	Recognize and respond to external factors which influence planned instruction
6	3.681	1.732	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback
7	3.150	2.276	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
8	2.833	2.494	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness

Rank Order	Median (mdn)	IQR	Code	Tasks
2	3.992	2.118	4.0	NURTURE HUMANENESS
1	4.635	1.353	4.1	Nuture humaneness with students.
1	4.882	0.617	4.1.2	Admit that teachers also make mistakes and learn from them
2	4.878	0.621	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
3	4.823	0.717	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
4	4.810	0.821	4.1.9	Encourage students to know that they are respected as individuals
5	4.706	1.790	4.1.11	Extend the positive student-teacher relationship to include informal contacts
6	4.689	1.163	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
7	4.625	1.633	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
8	4.565	1.303	4.1.10	Provide personal guidance to students
9	4.285	1.595	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
10	3.833	1.915	4.1.6	Help students interpret their relationship to their environment
11	3.166	3.196	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	4.045	1.754	4.2	Nurture humaneness with the school staff.
1	4.843	0.656	4.2.5	Employ tact and judgment in interacting with other school staff members
2	4.750	0.958	4.2.1	Accept assistance from and give assistance to fellow staff members
3	4.038	1.688	4.2.2	Obtain and lend assistance to school projects being developed by other staff members
4	3.566	1.450	4.2.3	Participate in school staff social events
5	3.454	1.620	4.2.4	Serve on and cooperate with school staff committees
6	3.227	1.886	4.2.6	Offer recommendations in matters of school policy

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.650	2.054	4.4	Nurture humaneness to one's self.
1	4.400	1.543	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaghing
2	3.071	1.907	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
4	2.838	2.126	4.3	Nurture humaneness with parents and community.
1	3.375	2.958	4.3.1	Participate in community activities and service organizations
2	3.307	1.497	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
3	3.178	1.810	4.3.2	Evidence interest in graduated students
4	2.884	1.923	4.3.6	Become familiar with services provided by the community, e.g.: public library, museums, other schools, cultural center. etc.
5	2.807	2.375	4.3.5	Identify and respect goals parents have for their children
6	2.593	1.359	4.3.3	Participate in parent-teacher functions
7	1.722	2.095	4.3.7	Work with community service personnel, e.g.: librarians, social workers, clergy, training schools

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.984	1.647	6.0	MANAGE LEARNING ENVIRONMENT
1	4.674	1.326	6.5	Respond to social-emotional climate.
1	4.894	0.605	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
2	4.828	0.699	6.5.5	Be responsive to human needs of student
3	4.810	0.798	6.5.4	Use rewards and punishment to control deviant behavior
4	4.803	1.401	6.5.7	Establish rapport and empathy with students
5	4.343	1.296	6.5.1	Identify internal and external causes of discipline problems
6	4.088	1.516	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
7	3.437	2.156	6.5.6	Use self-evaluation techniques regarding your inter-relationship with students
2	4.543	1.474	6.3	Provide for maintenance.
1	4.767	1.092	6.3.2	Diagnose maintenance problems in tools and equipment
2	4.758	0.924	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
3	4.318	1.869	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
4	3.857	1.991	6.3.1	Develop and carry out a routine preventative maintenance schedule
3	4.538	2.556	6.4	Maintain records and filing systems.
1	4.934	0.565	6.4.1	Keep attendance records for each class taught
2	4.859	0.640	6.4.5	Keep records of student grades for each class taught
3	4.828	0.699	6.4.2	Keep student progress records for each class
4	4.634	1.536	6.4.4	Keep a record of purchase orders and inventories
5	3.944	2.065	6.4.7	Keep an up-to-date industrial and educational supply catalog file
6	2.964	2.424	6.4.3	Keep equipment and tool inventories
7	1.232	0.939	6.4.6	Keep records of federal and state funding programs
4	4.400	1.379	6.6	Establish physical conditions conducive to learning.
1	4.881	0.618	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories
2	4.400	1.127	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.583	1.301	6.6.2	Take actions to enhance the room interior with displays, bulletin boards, etc.
5	2.609	2.046	6.2	Requisition and receive supplies and materials.
1	4.029	1.650	6.2.4	Receive and check in supplies and materials
2	2.733	1.413	6.2.1	Take inventory of supplies and materials
3	2.600	1.750	6.2.3	Order new educational materials and supplies
4	2.000	0.656	6.2.2	Prepare budgets for formal approval
6	2.333	1.719	6.1	Plan for and organize the facilities needed for the program.
1	3.714	1.814	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
2	2.900	2.333	6.1.3	Plan layout for effective space utilization to meet program needs
3	2.391	1.626	6.1.7	Make an immediate and long-range plan for acquisition of equipment and tools
4	2.263	1.672	6.1.1	Identify and develop an industrial education program and the facility to house it
5	2.240	1.768	6.1.8	Prepare, submit, and defend budget requests for equipment and tools
6	2.152	1.254	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
7	2.021	0.956	6.1.2	Write a program statement for your shop or laboratory
8	1.944	1.108	6.1.6	Write specifications for equipment and tools

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.409	2.317	3.0	DESIGN INSTRUCTION
1	4.284	1.565	3.5	Select teaching activities and strategies.
1	4.522	1.365	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
2	4.375	1.292	3.5.2	Integrate learning and teaching activities into instructional plans
3	3.777	1.975	3.5.1	Plan strategies for teaching including meeting the needs of special groups
2	3.908	2.402	3.9	Prepare lesson plans for group and individualized instruction.
1	4.648	1.150	3.9.2	Identify and select learning activities for students
2	4.388	1.976	3.9.7	Sequence presentation of instructional materials
3	4.100	2.494	3.9.6	Keep records of lessons planned and suggestions for improvement
4	3.454	1.772	3.9.4	Identify and select appropriate learning resources
5	3.277	2.363	3.9.1	Write objectives for lesson plans
6	3.055	2.610	3.9.3	Identify and select appropriate teacher activities
7	2.600	2.769	3.9.5	Validate content against levels within domains for lesson plans
3	3.801	2.065	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.775	0.950	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.: perceiving, communicating, learning, decision making, organizing, co-responding, creating, valuing, problem solving
2	4.150	2.111	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advanced occupational education
3	3.966	1.785	3.4.7	Develop alternative learning activities to provide for individual student needs
4	3.937	1.741	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
5	3.656	1.442	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.192	1.875	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others
7	2.500	2.134	3.4.1	Consult resources to identify learning activities
4	3.616	2.566	3.1	Write performance objectives for each course.
1	4.357	2.037	3.1.3	Identify conditions under which student behavior modification will take place
2	4.294	1.275	3.1.2	Identify student behavior or product of student behavior
3	3.800	2.128	3.1.4	Identify performance standard for performance objectives
4	2.500	2.866	3.1.1	Identify student population who will receive instruction
5	2.315	1.637	3.1.5	Write the performance objective at the appropriate level and domain
5	3.464	2.065	3.6	Identify and prepare instructional resources.
1	4.944	0.555	3.6.5	Prepare instructional materials
2	3.500	1.842	3.6.4	Review and select written resources for instruction
3	3.312	1.472	3.6.3	Review and select audio-visual resources
4	2.937	1.727	3.6.1	Review and select personnel resources
5	2.681	1.682	3.6.2	Review and select industrial resources
6	3.362	2.150	3.7	Develop a strategy for evaluating instruction.
1	4.400	1.127	3.7.4	Plan for written and manipulative performance tests
2	3.566	1.425	3.7.2	Formulate a grading policy and plans for making it known to students
3	2.875	2.090	3.7.3	Plan for self-evaluation techniques to be used by students
4	2.642	2.678	3.7.1	Decide whether evaluation will employ norm-based or mastery grading procedures
5	2.500	1.702	3.7.5	Plan for student evaluation of course
7	3.205	1.956	3.2	Organize objectives into appropriate sequences.
1	3.708	1.929	3.2.2	Group and sequence performance objectives into appropriate units of instruction
2	2.750	1.793	3.2.1	Identify which objectives are dependent on other objectives for their attainment

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.939	2.218	3.3	Validate content against domains and against levels within domains.
1	3.750	1.660	3.3.6	Make any needed adjustments to content by levels within each domain
2	3.590	3.166	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
3	3.388	2.122	3.3.3	Make adjustments to content within domains to obtain needed balance
4	2.785	2.196	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
5	2.250	1.368	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
6	2.125	1.926	3.3.2	Observe that the desired domains are represented and what their balance is
9	2.190	1.083	3.8	Organize and complete the course of study.
1	3.093	1.538	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
2	2.115	0.951	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution
3	2.090	0.651	3.8.2	Write course description
4	1.933	0.700	3.8.1	Write introduction to course of study

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.270	2.789	9.0	EVALUATE INSTRUCTION
1	4.230	1.283	9.1	Assess whether students have assimilated the material presented.
1	4.423	1.319	9.1.1	Use the evaluation policy which was previously made known to students
2	4.236	1.229	9.1.2	Determine whether students met performance standards
3	4.083	1.263	9.1.3	Apply methods to be used to evaluate instruction
2	3.638	1.952	9.4	Determine efficiency and effectiveness of instruction.
1	4.264	1.235	9.4.5	Appraise student performance in relation to instructional goals
2	3.970	1.482	9.4.1	Analyze and interpret results of instructional measurement
3	3.964	2.041	9.4.6	Determine whether students are generally happy with the instruction
4	3.710	1.497	9.4.2	Consult with colleagues regarding assessment of your teaching
5	2.607	2.155	9.4.4	Compare pretest and posttest results
6	2.500	2.178	9.4.3	Analyze student evaluation of instruction
3	2.635	2.915	9.3	Administer evaluative experiences.
1	4.000	1.386	9.3.3	Administer written and manipulative performance tests
2	3.125	1.575	9.3.2	Conduct student self-evaluation procedures
3	2.900	3.773	9.3.4	Maintain a daily instructional evaluation log book
4	1.460	2.520	9.3.1	Administer pretests and posttests
5	1.187	0.799	9.3.5	Administer standardized tests
4	2.598	2.648	9.2	Construct and evaluate measuring instruments and procedures.
1	3.900	2.428	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
2	3.880	1.511	9.2.7	Evaluate tests in terms of useability, objectivity, difficulty, and discrimination
3	3.250	2.712	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
4	2.812	2.028	9.2.5	Develop pretests and posttests
5	2.666	2.714	9.2.6	Analyze test instrument validity and reliability

Rank Order	Median (mdn)	IQR	Code	Tasks
6	2.307	2.147	9.2.3	Formulate devices to measure affective behavior (e.g., attitudes and values)
7	2.230	1.829	9.2.1	Devise self-evaluation techniques for use by students
8	1.000	0.500	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.029	2.364	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	3.930	2.063	1.1	Provide for re-generation and development of competencies.
1	4.500	1.454	1.1.5	Improve skills of interaction with others
2	4.285	1.524	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
3	3.812	2.369	1.1.2	Improve your technical skills
4	3.727	1.741	1.1.1	Regenerate teaching skills and strategies
5	3.076	2.236	1.1.4	Accept professional assignments
2	2.586	2.041	1.3	Use self-evaluation techniques.
1	3.375	2.172	1.3.4	Periodically self-reflect and evaluate education and life philosophies
2	3.115	1.969	1.3.2	Participate in self-evaluation techniques
3	2.285	1.628	1.3.3	Consult supervisory and administrative evaluations for self-improvement
4	2.050	1.200	1.3.1	Select a teaching position for which you feel qualified
3	2.456	2.032	1.2	Keep up with development in the field.
1	4.653	1.043	1.2.2	Read current professional literature for self-improvement
2	2.541	1.728	1.2.5	Visit industries and consult with professional and technical personnel
3	2.350	1.150	1.2.1	Attend in-service seminars and workshops
4	2.307	1.284	1.2.3	Pursue further formal technical and professional education for self-improvement
5	2.225	2.325	1.2.6	Subscribe to educational and technical journals
6	2.048	0.677	1.2.4	Maintain membership in professional and technical organizations

Rank Order	Median (mdn)	IQR	Code	Tasks
7	2.881	1.970	10.0	EVALUATE PROGRAMS
1	3.289	2.010	10.4	Determine effectiveness of program implementation.
1	4.062	1.600	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
2	4.000	1.564	10.4.5	Assess appropriateness of learning activities to the program
3	3.250	2.190	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
4	3.125	2.300	10.4.1	Assess validity of original sources of curriculum content at the program level
5	2.843	1.492	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program-level
6	2.380	1.468	10.4.6	Review sequences of courses comprising the program
2	2.977	2.312	10.3	Determine output characteristics of students.
1	4.111	1.175	10.3.1	Assess the degree of student achievement of program objectives
2	3.833	1.444	10.3.5	Determine whether students enjoy the curriculum and are generally happy with in
3	2.354	2.573	10.3.4	Compare present students achievement with previous student achievements in the program
4	2.295	1.463	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
5	1.566	1.207	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
3	2.731	1.860	10.2	Assess factors influencing program.
1	3.642	1.928	10.2.1	Determine interests, abilities and experiences of students entering the program
2	3.000	1.366	10.2.3	Review adequacy and utilization of facilities for program
3	2.681	1.874	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs
4	2.264	1.582	10.2.4	Determine utilization made of community resources in program-level development
5	2.218	1.546	10.2.2	Review teacher competencies with respect to program-level goals

Rank Order	Median (mdn)	IQR	Code	Tasks
4	1.897	2.005	10.1	Collect information at the program-level.
1	3.388	1.967	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation of program
2	2.343	1.653	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
3	1.791	1.713	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program
4	1.785	1.952	10.1.2	Design and administer forms for evaluation of programs by students
5	1.458	2.583	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs
6	1.333	1.250	10.1.1	Conduct program-level follow-up study
7	1.300	1.155	10.1.6	Consult advisory committees to determine quality of instructional program

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.403	2.030	2.0	DESIGN PROGRAMS
1	2.726	2.240	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.708	1.054	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
2	3.375	1.871	2.2.6	Identify past, present and probable future impacts of industry on society
3	3.250	2.375	2.2.5	Develop and maintain an up-to-date industrial resource file
4	3.000	1.962	2.2.2	Decide upon basic functions of industry to be studied in the program
5	2.600	2.283	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
6	2.583	2.010	2.2.7	Study labor in industry as a basis for program-level curriculum development
7	2.388	1.472	2.2.9	Establish tentative program-level goals for industrial education in relation to industry
8	2.000	1.555	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
9	1.666	1.230	2.2.8	Select published taxonomy or develop a taxonomy of industry
2	2.662	2.016	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	3.428	2.339	2.1.1	Read and interpret current and historical literature for program-level input
2	3.416	2.409	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
3	3.388	2.144	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
4	3.117	1.280	2.1.5	Relate current problems to industrial education programs
5.5	2.727	1.957	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
5.5	2.727	1.930	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs
7	2.500	1.494	2.1.10	Suggest program-level improvements in industrial education based on societal needs

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.343	1.744	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
9	2.133	1.613	2.1.7	Consider alternative solutions to societal problems at the program planning level
10	1.714	1.496	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
3	2.656	2.036	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	3.651	2.226	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
2	3.066	1.663	2.4.3	Examine previously proposed solutions and use or propose solution to problems and ways to meet human needs through the program
3	3.000	2.090	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
4	2.538	1.491	2.4.6	Structure the content from which to draw for program-level curriculum development
5	2.136	1.895	2.4.2	Identify human needs including those of differing cultures
6	2.055	1.809	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
4	2.346	1.877	2.8	Develop implementation strategies for new programs and changes in existing program.
1	4.629	1.080	2.8.2	Read current literature on educational change and change strategy
2	2.968	1.587	2.8.8	Develop alternate change strategies for program implementation
3	2.600	1.844	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes
4	2.500	1.741	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that is is compatible to these values and experiences

Rank Order	Median (mdn)	IQR	Code	Tasks
5	2.357	1.503	2.8.9	Establish timetable for program change implementation
6	2.333	1.666	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level
7	2.315	1.942	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
8	2.300	1.351	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
9	1.941	0.617	2.8.10	Prepare budget for proposed program changes
10	1.750	1.214	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood
11	1.250	1.500	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
5	2.311	1.788	2.5	Develop new and existing programs in terms of expected task outcomes.
1	3.272	2.084	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
2	2.611	1.944	2.5.3	Develop program-level objectives
3	2.315	1.873	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
4	2.187	1.854	2.5.4	Establish criteria for selection of tasks for education and training programs
5	1.909	1.776	2.5.2	Develop program-level mission statement(s)
6	1.894	1.236	2.5.1	Develop program-level rationale(s)
6	2.284	1.475	2.6	Collect tasks into appropriate instructional groups for teaching (e.g., courses, units, etc.)
1	2.500	1.946	2.6.2	Develop rationale for course(s) consistent with program-level rationale
2	2.416	1.241	2.6.4	Develop objectives for course(s) consistent with program-level objectives
3	2.289	1.282	2.6.1	Identify student populations to be served as a basis for determining program experiences
4	1.833	1.415	2.6.3	Develop mission statement for course(s)

Rank Order	Median (mdn)	IQR	Code	Tasks
7	1.976	2.404	2.7	Develop a plan for continual revision and improvement of programs.
1	4.300	1.694	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	2.735	1.382	2.7.1	Plan for student evaluation of courses and programs
3	1.395	1.602	2.7.2	Consult with industrial and educational advisory board
4	1.296	2.651	2.7.4	Maintain a program-level instruction evaluation log book
5	1.187	0.739	2.7.5	Prepare follow up studies of graduates of the program
8	1.530	1.429	2.3	Study group cultures and principles of learning in order to related instruction to the individuals for whom the program and instruction is being planned.
1	2.100	1.987	2.3.3	Identify appropriate learning principles for target populations at the program level
2	1.541	1.467	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	1.196	0.860	2.3.1	Identify various group cultures that may compose target populations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
9	2.068	2.778	7.0	PROVIDE PROFESSIONAL SERVICE
1	3.533	2.466	7.1	Advise and counsel students.
1	4.714	1.440	7.1.6	Assist students in developing good study habits
2	4.580	1.067	7.1.3	Recognize potential problems of students
3	4.312	1.939	7.1.8	Assist students with personal and occupational problems
4	4.117	1.253	7.1.4	Hold individual student conferences
5	3.656	1.424	7.1.1	Provide students with occupational information
6	3.605	2.335	7.1.7	Work with guidance counselors in assisting students
7	3.357	2.871	7.1.2	Administer subject matter diagnostic tests
8	3.000	1.668	7.1.5	Confer with parents concerning student educational development
9	2.541	1.964	7.1.11	Involve resource persons and agencies in assisting students
10	2.050	1.354	7.1.9	Write letters of recommendation
11	1.395	1.468	7.1.10	Assist students in securing and filling out job applications
2	3.097	1.885	7.4	Offer professional advice.
1	3.555	1.502	7.4.2	Suggest program and instruction improvements
2	3.035	1.843	7.4.1	Make laboratory and facility planning suggestions
3	2.500	2.071	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
3	3.031	3.409	7.3	Assist in general school duties.
1	4.833	0.666	7.3.2	Participate in non-instructional school duties
2	2.714	2.497	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school
3	2.071	3.082	7.3.3	Serve as class advisor
4	1.314	2.342	7.3.4	Sponsor student club activities
4	1.641	1.656	7.2	Participate in service activities of the educational and civic community.
1	2.500	1.619	7.2.2	Actively join in local, state, and national education activities
2	2.450	2.556	7.2.1	Serve on and chair school and community committees
3	1.166	0.666	7.2.4	Participate in school accreditation visits
4	1.128	0.628	7.2.3	Initiate and organize special community service committees as needed

Rank Order	Median (mdn)	IQR	Code	Tasks
5	1.301	1.197	7.6	Contribute to literature of the field through technical and/or professional writing.
1	2.222	1.566	7.6.1	Write proposals appropriate to needs of the discipline
2	1.138	0.638	7.6.3	Develop written instructional materials for publication
3	1.054	0.554	7.6.2	Write reviews of new tests, instructional aids, and media for education journals
6	1.274	1.895	7.7	Supervise student teachers.
1	4.652	2.888	7.7.6	Demonstrate effective techniques and methods for observation
2	1.425	1.341	7.7.1	Provide student-teacher with orientation to the school, classroom and community
3	1.420	2.290	7.7.9	Make formal evaluations of student-teacher's performance
4	1.400	2.925	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
5	1.365	2.692	7.7.4	Create situations so that the student-teacher can initiate the instruction activities
6	1.156	0.656	7.7.5	Hold conferences with student-teacher regarding his performance, progress and problems
7	1.121	0.621	7.7.3	Assign teaching responsibilities to student-teachers
8	1.052	0.552	7.7.2	Prepare the class for the arrival of student-teachers
9	1.025	0.525	7.7.7	Observe student-teacher's performance in the classroom
7	1.156	0.656	7.5	Develop programs of professional service.
1	1.267	1.324	7.5.2	Develop adult evening extension programs
2	1.166	0.666	7.5.1	Organize and conduct workshops and in-service educational programs
3	1.109	0.609	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials
4	1.100	0.600	7.5.3	Initiate remedial and summer programs for students

Rank Order	Median (mdn)	IQR	Code	Tasks
10	1.707	1.817	8.0	UTILIZE RESEARCH
2	2.968	2.669	8.1	Identify needs (problems) amenable to research.
1	4.214	1.644	8.1.2	Identify causes and unfulfilled needs which contribute to classroom problems
2	3.291	1.916	8.1.4	Review available research applicable to identified problem
3	2.100	2.035	8.1.1	Develop an awareness of the need for solving educational problems through research
4	1.500	2.400	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
2	2.229	1.236	8.7	Apply decision-making process to the solution of instructional problems.
1	2.600	2.112	8.7.2	Make decisions on courses of action to be taken based on research evidence
2	2.531	1.502	8.7.3	Take action based on decision from research evidence
3	2.250	1.336	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
4	1.785	1.531	8.7.4	Evalute action taken based on research findings
3	1.987	1.902	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	3.227	1.785	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	2.394	1.502	8.6.5	Review the analysis of research data
3	1.954	1.908	8.6.1	Read the research report and identify the major parts
4	1.791	1.515	8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study
5	1.750	1.337	8.6.6	Evaluate the conclusions of a research report
6	1.722	1.952	8.6.4	Assess the validity and reliability of research procedures
7	1.258	1.228	8.6.3	Evaluate the sampling procedures of research reports
4	1.935	1.865	8.5	Cooperate in research effort of others.
1	2.805	1.468	8.5.2	Assess and respond to educational research instruments
2	2.230	1.910	8.5.1	Assist in implementation and evaluation of innovative programs
3	1.213	0.890	8.5.3	Organize and set-up pilot programs in cooperation with other researchers

Rank Order	Median (mdn)	IQR	Code	Tasks
5	1.515	1.597	8.3	Conduct proposed research.
1	2.000	1.730	8.3.3	Draw conclusions and project implications based on analysis of research data
2	1.420	1.331	8.3.2	Analyze and interpret data collected for research studies
3	1.351	1.824	8.3.1	Collect research data by appropriate methods, e.g., historical, descriptive, experimental
6	1.341	1.239	8.2	Prepare proposals for researching a problem.
1	2.125	2.000	8.2.6	Select or develop an instrument appropriate to a researchable problem
2	2.000	1.517	8.2.3	Formulate objectives or hypotheses to be answered through research study
3	1.607	1.261	8.2.1	Develop a concise statement of the research problem
4	1.288	1.133	8.2.7	Develop a management strategy for the control of the research study
5	1.285	1.023	8.2.9	Submit research proposal to appropriate funding bodies
6	1.250	1.093	8.2.4	Select and describe the research design to be used in a proposed research study
7	1.206	0.896	8.2.2	Write a rationale for a research study including a review of literature
8	1.142	0.642	8.2.5	Select a population for a particular research study
9	1.138	0.638	8.2.8	Prepare a budget estimate in fiscal terms for a research study
7	1.184	0.756	8.4	Write research reports.
1	1.452	1.216	8.4.3	Complete final draft of research report
2	1.114	0.614	8.4.2	Formally review and revise preliminary draft of research report
3	1.080	0.580	8.4.1	Complete preparation of preliminary draft of research report, e.g.: introduction, methods, body, conclusions, implications, bibliography, appendices

APPENDIX B

IMPORTANCE OF TASKS

Tasks of Wisconsin Junior-Senior High School Industrial Education Teachers Ranked by Median (Mdn) Value of Their Response to "Task Importance" and Including Interquartile Range (IQR)

Rank Order	Median (mdn)	IQR	Code	Tasks
1	4.375	1.495	6.0	MANAGE LEARNING ENVIRONMENT
1	4.663	1.291	6.5	Respond to social-emotional climate.
1	4.925	0.574	6.5.2	Demonstrate firmness, fairness and consistency in dealing with discipline problems
2	4.703	0.976	6.5.5	Be responsive to human needs of student
3	4.678	1.180	6.5.7	Establish rapport and empathy with students
4	4.523	1.324	6.5.4	Use rewards and punishment to control deviant behavior
5	4.454	1.529	6.5.3	Develop alternate strategies for alleviating conditions which cause discipline problems
6	4.166	1.495	6.5.1	Identify internal and external causes of discipline problems
7	3.857	1.507	6.5.6	Use self-evaluation techniques regarding your inter-relationship with students
2	4.627	1.220	6.3	Provide for maintenance.
1	4.714	0.991	6.3.4	Test and adjust tools and equipment prior to returning them to use after maintenance
2	4.711	1.133	6.3.2	Diagnose maintenance problems in tools and equipment
3	4.541	1.177	6.3.1	Develop and carry out a routine preventative maintenance schedule
4	4.520	1.635	6.3.3	Provide for maintenance by servicing or referral for service as appropriate
3	4.411	1.656	6.4	Maintain records and filing systems.
1	4.785	0.928	6.4.5	Keep records of student grades for each class taught
2	4.640	1.229	6.4.2	Keep student progress records for each class
3	4.604	1.377	6.4.4	Keep a record of purchase orders and inventories
4	4.450	1.626	6.4.7	Keep an up-to-date industrial and educational supply catalog file
5	4.409	1.601	6.4.1	Keep attendance records for each class taught
6	4.250	1.399	6.4.3	Keep equipment and tool inventories
7	2.625	2.541	6.4.6	Keep records of federal and state funding programs

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.324	1.487	6.2	Requisition and receive supplies and materials.
1	4.666	1.128	6.2.3	Order new educational materials and supplies
2	4.428	1.370	6.2.4	Receive and check in supplies and materials
3	4.307	1.411	6.2.2	Prepare budgets for formal approval
4	3.769	1.710	6.2.1	Take inventory of supplies and materials
5	4.286	1.599	6.6	Establish physical conditions conducive to learning.
1	4.741	1.093	6.6.1	Maintain control of comfortable temperature, lighting, and noise levels in classrooms and laboratories
2	4.541	1.104	6.6.3	Establish classroom procedures which avoid confusion and provide freedom of movement to students
3	3.152	0.948	6.6.2	Take actions to enhance the room interior with displays, bulletin boards, etc.
6	4.018	1.686	6.1	Plan for and organize the facilities needed for the program.
1	4.706	1.026	6.1.8	Prepare, submit, and defend budget requests for equipment and tools
2	4.543	1.355	6.1.1	Identify and develop an industrial education program and the facility to house it
3	4.157	1.191	6.1.7	Make an immediate and long-range plan for acquisition of equipment and tools
4	4.000	1.405	6.1.4	Consult catalogs of industrial and educational supplies for specification of equipment available
5	3.966	1.541	6.1.3	Plan layout for effective space utilization to meet program needs
6	3.868	1.347	6.1.5	Prepare a list of specific equipment and tools appropriate to program level and needs
7	3.090	2.339	6.1.6	Write specifications for equipment and tools
8	3.076	1.944	6.1.2	Write a program statement for your shop or laboratory

Rank Order	Median (mdn)	IQR	Code	Tasks
2	4.336	1.359	5.0	FACILITATE LEARNING
1	4.481	1.289	5.3	Interact with students in a positive manner.
1	4.916	0.583	5.3.3	Express interest in students
2	4.808	0.779	5.3.8	Express enthusiasm for your students and the subject matter
3	4.680	1.032	5.3.7	Provide students with clear understandings of what is expected of them and what they can expect from their teacher
4	4.586	1.110	5.3.1	Use processes of perceiving, communicating, knowing, co-responding patterning, decision-making, creating, valuing, problem solving, and learning in interacting with students
5	4.473	1.107	5.3.2	Establish atmosphere for positive group interaction
6	4.470	1.209	5.3.10	Demonstrate an attitude of fairness and commitment on issues important to students
7	4.392	1.375	5.3.11	Use knowledge of students as a basis for positive interaction during instruction
8	4.175	1.184	5.3.6	Use student interests in planning student activity
9	4.131	1.171	5.3.4	Make provision for student input into instruction
10	4.115	1.583	5.3.5	Plan individualized instruction with students
11	3.083	2.111	5.3.9	Recognize and interact with subcultures unique to the student population
2	4.385	1.410	5.2	Motivate students.
1	4.894	0.605	5.2.2	Win the students' attention and maintain level of arousal
2	4.678	1.180	5.2.6	Reward student achievement
3	4.666	1.183	5.2.8	Provide students immediate feedback to tests
4	4.625	1.244	5.2.3	Vary classroom routine to prevent monotony and boredom
5	4.147	1.312	5.2.5	Recognize and encourage evidences of response to internal motivation
6	3.906	1.356	5.2.7	Recongize and react to behavior which merits no reward
7	3.785	1.520	5.2.4	Recognize and encourage evidences of response to external motivation
8	3.750	1.472	5.2.1	Determine the entering dispositions of individual students

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.305	1.323	5.5	Teach the substantive content of the field.
1	4.700	1.199	5.5.5	Provide experiences which contribute to the teaching of students to use processes, e.g.: perceiving, communicating, learning, decision-making, organizing, co-responding, creating, valuing, problem-solving
2	4.294	1.205	5.5.2	Provide exploratory experience related to industry which will provide some students a basis for selecting an occupation and will provide all students respect for the pursuits of others
3	4.184	1.244	5.5.1	Provide experiences which will contribute to the student's understanding of industry as a major element in our culture
4	4.156	1.256	5.5.4	Provide experiences which some students may use as a base for developing avocational activities
5	4.100	1.479	5.5.3	Provide experiences for some students to prepare them for entry into appropriate industrially related occupations or to develop a base for advanced occupational education
4	4.239	1.388	5.4	Adjust plans and strategies based on observed feedback from students.
1	4.583	1.291	5.4.8	Be sensitive to non-verbal feedback
2	4.392	1.299	5.4.3	Adjust the learning environment (facilities) to provide optimum learning conditions
3	4.333	1.198	5.4.6	Capitalize on spontaneous student interests
4	4.263	1.203	5.4.2	Modify instructional methods in the light of student feedback
5	4.200	2.017	5.4.1	Be sensitive to solicited and unsolicited student feedback
6	4.138	1.282	5.4.7	Make final decisions on placement of instructional sequences for optimum effectiveness
7	4.058	1.371	5.4.4	Revise time allocations for instructional plans and strategies based on student feedback
8	3.968	1.498	5.4.5	Recognize and respond to external factors which influence planned instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
5	4.213	1.374	5.1	Executive instructional plans and strategies.
1	4.905	0.594	5.1.5	Be aware of whether students are working safely and take appropriate preventative and corrective measures
2	4.750	0.937	5.1.4	Present lessons and related demonstrations
3	4.547	1.086	5.1.1	Identify individual needs of students
4	4.300	1.138	5.1.3	Make students aware of instructional intent and proposed outcomes of instruction
5	3.750	1.385	5.1.6	Use educational resources in executing instructional plans
6	3.578	1.133	5.1.7	Conduct field trips and other outside-class activities
7	3.545	1.169	5.1.2	Find out what students expect from the instruction

Rank Order	Median (mdn)	IQR	Code	Tasks
3	4.049	1.674	4.0	NURTURE HUMANENESS
1	4.435	1.321	4.1	Nurture humaneness with students.
1	4.781	0.867	4.1.4	Encourage, recognize and acknowledge original ideas of students--even though imperfect and unfinished
2	4.769	0.884	4.1.9	Encourage students to know that they are respected as individuals
3	4.758	0.879	4.1.2	Admit that teachers also make mistakes and learn from them
4	4.660	1.080	4.1.5	Take time to listen to students and acknowledge their ideas and commitments as being worthy of expression
5	4.629	1.114	4.1.3	Maintain atmosphere where adventure in learning is encouraged without fear of consequences of failure
6	4.361	1.170	4.1.10	Provide personal guidance to students
7	4.323	1.277	4.1.11	Extend the positive student-teacher relationship to include informal contacts
8	4.192	1.569	4.1.1	Encourage students to think of alternatives and to recognize knowledge as imperfect, incomplete, and tentative
9	4.125	1.499	4.1.8	Develop group and team learning situations to foster in students a mutual concern for one another
10	3.833	1.395	4.1.6	Help students interpret their relationship to their environment
11	2.857	2.597	4.1.7	De-emphasize inter-student competition in the classroom as a basis for student achievement
2	4.014	1.719	4.2	Nurture humaneness with the school staff.
1	4.653	1.160	4.2.5	Employ tact and judgment in interacting with other school staff members
2	4.642	1.071	4.2.1	Accept assistance from and give assistance to fellow staff members
3	4.125	1.634	4.2.6	Offer recommendations in matters of school policy
4	3.545	1.889	4.2.4	Serve on and cooperate with school staff committees
5	3.375	1.712	4.2.3	Participate in school staff social events
6	3.309	1.190	4.2.2	Obtain and lend assistance to school projects being developed by other staff members

Rank Order	Median (mdn)	IQR	Code	Tasks
3	3.983	1.528	4.4	Nurture humaneness to one's self.
1	4.062	1.181	4.4.1	Employ teacher traits in balance between those required for individual self-fulfillment and those required for successful teaching
2	3.892	1.675	4.4.2	Reassess personal objectives and take action to continue growth towards self-actualizing
4	3.438	1.590	4.3	Nurture humaneness with parents and community.
1	3.812	1.854	4.3.5	Identify and respect goals parents have for their children
2	3.678	1.404	4.3.4	Make provisions for personal contacts with parents concerning the progress of their children
3	3.538	1.548	4.3.6	Become familiar with services provided by the community, e.g.: public library, museums, other schools, cultural center, etc.
4	3.323	1.475	4.3.2	Evidence interest in graduated students
5	3.312	1.614	4.3.1	Participate in community activities and service organizations
6	3.235	1.445	4.3.7	Work with community service personnel, e.g.: librarians, social workers, clergy, training schools
7	3.214	1.750	4.3.3	Participate in parent-teacher functions

Rank Order	Median (mdn)	IQR	Code	Tasks
4	4.023	1.491	1.0	IMPROVE INDIVIDUAL'S COMPETENCIES
1	4.224	1.291	1.1	Provide for re-generation and development of competencies.
1	4.560	1.170	1.1.2	Improve your technical skills
2	4.275	1.162	1.1.3	Independently accept and solve technical and other problems related to teaching assignments
3	4.235	1.264	1.1.5	Improve skills of interaction with others
4	4.222	1.204	1.1.1	Regenerate teaching skills and strategies
5	3.714	1.666	1.1.4	Accept professional assignments
2	3.918	1.439	1.2	Keep up with development in the field.
1	4.352	1.246	1.2.2	Read current professional literature for self-improvement
2	4.195	1.049	1.2.3	Pursue further formal technical and professional education for self-improvement
3	3.884	1.692	1.2.6	Subscribe to educational and technical journals
4	3.718	1.408	1.2.4	Maintain membership in professional and technical organizations
5	3.687	1.406	1.2.5	Visit industries and consult with professional and technical personnel
6	3.447	1.271	1.2.1	Attend in-service seminars and workshops
3	3.894	1.659	1.3	Use self-evaluation techniques.
1	4.545	1.386	1.3.1	Select a teaching position for which you feel qualified
2	4.100	1.512	1.3.2	Participate in self-evaluation techniques
3	3.550	1.718	1.3.4	Periodically self-reflect and evaluate education and life philosophies
4	3.428	1.348	1.3.3	Consult supervisory and administrative evaluations for self-improvement

Rank Order	Median (mdn)	IQR	Code	Tasks
5	3.929	1.589	3.0	DESIGN INSTRUCTION
1	4.225	1.309	3.5	Select teaching activities and strategies.
1	4.416	1.390	3.5.1	Plan strategies for teaching including meeting the needs of special groups
2	4.214	1.479	3.5.2	Integrate learning and teaching activities into instructional plans
3	4.190	1.104	3.5.3	Make decisions concerning the extent to which the instruction is to be individualized
2	4.159	1.443	3.4	Develop (or identify) student learning activities appropriate to each behavioral objective (make the content operational).
1	4.750	0.943	3.4.6	Plan experiences which will contribute to teaching students how to use processes, e.g.: perceiving, communicating, learning, decision making, organizing, co-responding, creating, valuing, problem solving
2	4.423	1.399	3.4.4	Plan experiences for some students which will prepare them for entry into industrially related occupations or to develop a base for advanced occupational education
3	4.281	1.256	3.4.2	Plan experiences which will contribute to the students' understanding of industry as a major element in our culture
4	4.175	1.184	3.4.5	Plan experiences which some students may use as a base for developing avocational activities
5	4.045	1.092	3.4.3	Plan exploratory experiences related to industry which will provide some students a base for occupational choice and all students a respect for the pursuits of others
6	3.973	1.369	3.4.7	Develop alternative learning activities to provide for individual student needs
7	3.157	1.725	3.4.1	Consult resources to identify learning activities
3	3.950	1.496	3.6	Identify and prepare instructional resources.
1	4.854	0.645	3.6.5	Prepare instructional materials
2	3.975	1.208	3.6.3	Review and select audio-visual resources
3	3.950	1.291	3.6.4	Review and select written resources for instruction
4	3.527	1.293	3.6.2	Review and select industrial resources
5	3.375	1.455	3.6.1	Review and select personnel resources

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.921	1.619	3.9	Prepare lesson plans for group and individualized instruction.
1	4.678	1.180	3.9.2	Identify and select learning activities for students
2	4.200	1.085	3.9.4	Identify and select appropriate learning resources
3	4.136	1.788	3.9.7	Sequence presentation of instructional materials
4	4.000	1.309	3.9.6	Keep records of lessons planned and suggestions for improvement
5	3.687	1.560	3.9.1	Write objectives for lesson plans
6	3.400	1.433	3.9.3	Identify and select appropriate teacher activities
7	3.125	1.777	3.9.5	Validate content against levels within domains for lesson plans
5	3.846	1.413	3.1	Write performance objectives for each course.
1	4.214	1.444	3.1.3	Identify conditions under which student behavior modification will take place
2	3.978	0.956	3.1.2	Identify student behavior or product of student behavior
3	3.833	1.466	3.1.4	Identify performance standard for performance objectives
4	3.775	1.468	3.1.1	Identify student population who will receive instruction
5	3.531	1.561	3.1.5	Write the performance objective at the appropriate level and domain
6	3.797	1.467	3.2	Organize objectives into appropriate sequences.
1	4.066	1.470	3.2.2	Group and sequence performance objectives into appropriate units of instruction
2	3.558	1.475	3.2.1	Identify which objectives are dependent on other objectives for their attainment
7	3.709	1.680	3.7	Develop a strategy for evaluating instruction.
1	4.590	1.272	3.7.2	Formulate a grading policy and plans for making it known to students
2	4.111	1.331	3.7.4	Plan for written and manipulative performance tests
3	3.416	1.714	3.7.3	Plan for self-evaluation techniques to be used by students
4	3.400	1.528	3.7.5	Plan for student evaluation of course
5	3.083	1.465	3.7.1	Decide whether evaluation will employ norm-based or mastery grading procedures

Rank Order	Median (mdn)	IQR	Code	Tasks
8	3.644	1.611	3.3	Validate content against domains and against levels within domains.
1	4.166	1.216	3.3.6	Make any needed adjustments to content by levels within each domain
2	3.857	1.500	3.3.3	Make adjustments to content within domains to obtain needed balance
3	3.833	1.252	3.3.4	Decide which levels within each domain should be represented and the balance of content that should be devoted to each
4	3.785	2.226	3.3.5	Observe whether the desired levels within domains are represented and what their balance is
5	3.125	1.417	3.3.1	Decide whether each domain should be represented and the balance of content which should be devoted to each
6	2.892	1.702	3.3.2	Observe that the desired domains are represented and what their balance is
9	3.387	1.432	3.8	Organize and complete the course of study.
1	3.638	1.251	3.8.3	Prepare a time-range plan suggesting a range of time allotted to each unit of instruction
2	3.500	1.380	3.8.2	Write course description
3	3.428	1.774	3.8.4	Arrange for the preparation of total course of study copy and subsequent distribution
4	3.027	1.160	3.8.1	Write introduction to course of study

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.699	1.523	10.0	EVALUATE PROGRAMS
1	4.063	1.345	10.4	Determine effectiveness of program implementation.
1	4.382	1.150	10.4.5	Assess appropriateness of learning activities to the program
2	4.125	1.099	10.4.6	Review sequences of courses comprising the program
3	4.088	1.377	10.4.2	Evaluate quality of instruction and teacher-student interrelationship within the program
4	4.000	1.491	10.4.1	Assess validity of original sources of curriculum content at the program level
5	3.958	1.699	10.4.4	Assess adequacy of instructional materials for carrying out learning activities at the program level
6	3.825	1.262	10.4.3	Determine appropriateness of course objectives in fulfilling student needs at the program-level
2	3.791	1.360	10.2	Assess factors influencing program.
1	4.309	1.103	10.2.1	Determine interests, abilities and experiences of students entering the program
2	3.954	0.909	10.2.3	Review adequacy and utilization of facilities for program
3	3.736	1.333	10.2.2	Review teacher competencies with respect to program-level goals
4	3.531	1.386	10.2.5	Determine the degree of articulation with general, college preparatory and vocational programs
5	3.176	1.359	10.2.4	Determine utilization made of community resources in program-level development
3	3.789	1.396	10.3	Determine output characteristics of students.
1	4.250	1.250	10.3.1	Assess the degree of student achievement of program objectives
2	3.900	1.222	10.3.5	Determine whether students enjoy the curriculum and are generally happy with it
3	3.763	1.332	10.3.3	Determine the degree to which the industrial education program satisfies societal, industrial and individual needs
4	3.464	1.369	10.3.2	Review program-level follow-up studies to ascertain the usefulness of material learned
5	3.461	1.548	10.3.4	Compare present students achievement with previous student achievements in the program

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.129	1.605	10.1	Collect information at the program-level.
1	3.500	1.533	10.1.3	Select (or design) and administer cognitive (knowledge) tests for evaluation or program
2	3.350	1.938	10.1.5	Select (or design) and administer tests of psychomotor abilities for evaluation of programs
3	3.275	1.387	10.1.7	Interact with and evaluate professional program-level curriculum viewpoints
4	3.033	1.522	10.1.6	Consult advisory committees to determine quality of instructional program
5	3.000	1.450	10.1.1	Conduct program-level follow-up study
6	2.941	1.706	10.1.4	Select (or design) and administer tests of attitudes for evaluation of the program
7	2.807	1.700	10.1.2	Design and administer forms for evaluation of programs by students

Rank Order	Median (mdn)	IQR	Code	Tasks
7	3.593	1.656	2.0	DESIGN PROGRAMS
1	3.671	1.405	2.6	Collect tasks into appropriate instructional groups for teaching (e.g., courses, units, etc.)
1	4.021	1.019	2.6.4	Develop objectives for course(s) consistent with program-level objectives
2	3.647	1.395	2.6.1	Identify student populations to be served as a basis for determining program experiences
3	3.575	1.211	2.6.2	Develop rationale for course(s) consistent with program-level rationale
4	3.208	2.102	2.6.3	Develop mission statement for course(s)
2	3.593	1.659	2.2	Study the institution of industry within our society as a source of the body of knowledge for industrial education.
1	4.153	1.617	2.2.2	Decide upon basic functions of industry to be studied in the program
2	4.093	1.342	2.2.1	Read magazines and journals that focus on industry as part of the study of the institution of industry
3	3.846	1.758	2.2.7	Study labor in industry as a basis for program-level curriculum development
4	3.766	1.666	2.2.6	Identify past, present and probable future impacts of industry on society
5	3.625	1.388	2.2.4	Consult available industrial personnel as part of the study of the institution of industry
6	3.576	1.548	2.2.5	Develop and maintain an up-to-date industrial resource file
7	3.406	1.453	2.2.3	Visit and observe representative industries as a source of the body of content for industrial education
8	3.388	1.365	2.2.9	Establish tentative program-level goals for industrial education in relation to industry
9	2.531	1.561	2.2.8	Select published taxonomy or develop a taxonomy of industry
3	3.528	1.606	2.5	Develop new and existing programs in terms of expected task outcomes.
1	4.050	1.100	2.5.3	Develop program-level objectives
2	3.944	1.285	2.5.5	Select tasks for which education and training are to be provided in the industrial education program(s)
3	3.735	1.443	2.5.6	Correlate the industrial education program as a sub-system of the total educational program
4	3.333	1.463	2.5.4	Establish criteria for selection of tasks for education and training programs
5	3.000	1.707	2.5.1	Develop program-level rationale(s)
6	2.653	1.923	2.5.2	Develop program-level mission statement(s)

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.511	1.554	2.8	Develop implementation strategies for new programs and changes in existing program.
1	4.346	1.367	2.8.10	Prepare budget for proposed program changes
2	4.230	1.573	2.8.2	Read current literature on educational change and change strategy
3	3.906	1.499	2.8.3	Re-examine the rationale and fully develop the reasons (advantages) for making proposed changes
4	3.735	1.285	2.8.11	Evaluate the effect of planned change on other curriculum areas and on the total curriculum
5	3.617	1.514	2.8.1	Establish curriculum implementation practices and sequence to move progressively from the existing system, through phases, into the planned system
6	3.600	1.363	2.8.8	Develop alternate change strategies for program implementation
7	3.261	1.099	2.8.9	Establish timetable for program change implementation
8	3.166	1.861	2.8.6	Plan an educational program for those who will implement the change so that the program and its ramifications are clearly understood
9	3.062	1.333	2.8.5	Identify "opinion leaders" and enlist their support of proposed changes at the program level
10	3.000	1.541	2.8.4	Consider the cultural values and past experiences of those persons who are supposed to make the change so that it is compatible to these values and experiences
11	2.807	1.809	2.8.7	Plan an educational program for the consumers of a proposed change so that they may see the value of the change
5	3.487	1.512	2.4	Analyze the study of society, industry and the individual to identify the problems and human needs toward which industrial education can make contributions.
1	3.800	1.533	2.4.1	Identify societal, industrial and individual problems toward which industrial education can contribute
2	3.782	1.246	2.4.4	Identify the jobs that need to be done toward which an industrial education program can contribute
3	3.538	1.476	2.4.3	Examine previously proposed solutions and use or propose solution to problems and ways to meet human needs through the program
4	3.352	1.329	2.4.6	Structure the content from which to draw for program-level curriculum development
5	3.205	1.434	2.4.5	Detail each job to be done in industrial education in terms of tasks to be performed for program-level curriculum development
6	2.944	1.959	2.4.2	Identify human needs including those of differing cultures

Rank Order	Median (mdn)	IQR	Code	Tasks
6	3.470	1.564	2.1	Study society in general and its problems in particular to maintain and improve the relevance of industrial education goals to society.
1	3.733	1.499	2.1.10	Suggest program-level improvements in industrial education based on societal needs
2	3.700	1.504	2.1.2	Listen to and interact with presentations about current status and the future as input to program-level curriculum development
3	3.666	1.305	2.1.8	Try promising approaches and alternatives to meeting the needs of society through industrial education programs
4	3.638	1.412	2.1.5	Relate current problems to industrial education programs
5	3.583	1.749	2.1.6	Identify contributions that industrial education can make toward the solution of societal problems
6	3.562	1.750	2.1.3	Make judgments about cause and effect in relating societal problems to industrial education programs
7	3.333	1.700	2.1.9	Establish tentative program-level goals for industrial education in relation to societal needs
8	3.300	1.692	2.1.1	Read and interpret current and historical literature for program-level input
9	3.290	1.400	2.1.4	Project trends and make predictions based on societies' problems and needs for program-level curriculum development
10	2.928	1.708	2.1.7	Consider alternative solutions to societal problems at the program planning level
7	3.201	1.893	2.7	Develop a plan for continual revision and improvement of programs.
1	4.608	1.783	2.7.3	Keep up with new literature related to general and industrial education for program improvement
2	3.555	1.254	2.7.1	Plan for student evaluation of courses and programs
3	3.000	1.763	2.7.5	Prepare follow-up studies of graduates of the program
4	2.781	1.433	2.7.2	Consult with industrial and educational advisory board
5	2.409	1.995	2.7.4	Maintain a program-level instruction evaluation log book

Rank Order	Median (mdn)	IQR	Code	Tasks
8	2.974	1.899	2.3	Study group cultures and principles of learning in order to relate instruction to the individuals for whom the program and instruction is being planned.
1	3.642	1.571	2.3.3	Identify appropriate learning principles for target populations at the program level
2	2.818	2.201	2.3.2	Examine the characteristics of group cultures to improve understanding of attitudes, needs, and interests of those making up the culture for program-level input
3	2.416	1.404	2.3.1	Identify various group cultures that may compose target populations for programs

Rank Order	Median (mdn)	IQR	Code	Tasks
8	3.509	1.906	7.0	PROVIDE PROFESSIONAL SERVICE
1	4.271	1.341	7.4	Offer professional advice.
1	4.541	1.138	7.4.2	Suggest program and instruction improvements
2	4.264	1.271	7.4.1	Make laboratory and facility planning suggestions
3	3.928	1.844	7.4.3	Relate to administrators and school board to keep them informed of trends and new developments
2	3.911	1.479	7.1	Advise and counsel students.
1	4.416	1.143	7.1.3	Recognize potential problems of students
2	4.261	1.047	7.1.1	Provide students with occupational information
3	4.250	1.326	7.1.6	Assist students in developing good study habits
4	4.176	1.323	7.1.7	Work with guidance counselors in assisting students
5	4.095	1.089	7.1.4	Hold individual student conferences
6	4.083	1.333	7.1.8	Assist students with personal and occupational problems
7	3.880	0.948	7.1.5	Confer with parents concerning student educational problems
8	3.350	1.784	7.1.11	Involve resource persons and agencies in assisting students
9	3.346	1.854	7.1.2	Administer subject matter diagnostic tests
10	3.277	1.486	7.1.9	Write letters of recommendation
11	3.083	1.825	7.1.10	Assist students in securing and filling out job applications
3	3.755	2.208	7.7	Supervise student teachers.
1	4.357	1.301	7.7.6	Demonstrate effective techniques and methods for observation
2	4.000	2.190	7.7.8	Offer criticism, encouragement and suggestions in joint evaluation with student-teacher
3	3.923	1.627	7.7.1	Provide student-teacher with orientation to the school, classroom and community
4	3.087	1.666	7.7.4	Create situations so that the student teacher can initiate the instruction activities
5	3.800	3.300	7.7.7	Observe student-teachers' performance in the classroom
6	3.444	1.920	7.7.9	Make formal evaluations of student-teacher's performance
7	3.375	3.363	7.7.5	Hold conferences with student-teacher regarding his performance, progress and problems
8	3.083	3.002	7.7.3	Assign teaching responsibilities to student-teacher
9	2.750	3.180	7.7.2	Prepare the class for the arrival of student-teachers

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.352	2.522	7.2	Participate in service activities of the educational and civic community.
1	3.321	1.321	7.2.1	Serve on and chair school and community committees
2	3.200	1.375	7.2.2	Actively join in local, state, and national education activities
3	2.607	1.811	7.2.4	Participate in school accreditation visits
4	2.264	1.352	7.2.3	Initiate and organize special community service committees as needed
5	3.056	2.043	7.3	Assist in general school duties.
1	4.000	1.814	7.3.1	Assist new teachers in system to understand policies, regulations and social functions of school
2	3.388	1.865	7.3.2	Participate in non-instructional school duties
3	2.666	1.472	7.3.4	Sponsor student club activities
4	2.500	1.594	7.3.3	Serve as class advisor
6	2.798	1.927	7.5	Develop programs of professional service.
1	3.041	2.181	7.5.2	Develop adult evening extension programs
2	3.000	1.685	7.5.3	Initiate remedial and summer programs for students
3	2.769	1.816	7.5.1	Organize and conduct workshops and in-service educational programs
4	2.250	1.645	7.5.4	Serve as advisor to educational suppliers in development of new resources and instructional materials
7	2.558	1.749	7.6	Contribute to literature of the field through technical and/or professional writing.
1	3.235	1.313	7.6.1	Write proposals appropriate to needs of the discipline
2	2.208	1.690	7.6.3	Develop written instructional materials for publication
3	2.000	1.580	7.6.2	Write reviews of new tests, instructional aids, and media for education journals

Rank Order	Median (mdn)	IQR	Code	Tasks
9	3.420	1.117	9.0	EVALUATE INSTRUCTION
1	4.105	1.193	9.1	Assess whether students have assimilated the material presented.
1	4.264	1.198	9.1.1	Use the evaluation policy which was previously made known to students
2	4.075	1.241	9.1.2	Determine whether students met performance standards
3	4.000	1.090	9.1.3	Apply methods to be used to evaluate instruction
2	3.728	1.359	9.4	Determine efficiency and effectiveness of instruction.
1	4.225	1.140	9.4.5	Appraise student performance in relation to instructional goals
2.5	4.000	0.859	9.4.1	Analyze and interpret results of instructional measurement
2.5	4.000	1.538	9.4.6	Determine whether students are generally happy with the instruction received
4	3.727	1.156	9.4.2	Consult with colleagues regarding assessment of your teaching
5	3.166	1.041	9.4.3	Analyze student evaluation of instruction
6	3.027	1.220	9.4.4	Compare pretest and posttest results
3	3.313	2.502	9.2	Construct and evaluate measuring instruments and procedures.
1	3.866	1.576	9.2.7	Evaluate tests in terms of useability, objectivity, difficulty, and discrimination
2	3.750	1.427	9.2.2	Formulate devices to measure cognitive (knowledge-type) behavior
3	3.550	1.954	9.2.4	Formulate devices to measure psychomotor (manipulative skill type) behavior
4	3.437	1.464	9.2.5	Develop pretests and posttests
5	3.375	1.312	9.2.3	Formulate devices to measure affective behavior (e.g., attitudes and values)
6	3.312	1.379	9.2.1	Devise self-evaluation techniques for use by students
7	3.233	1.508	9.2.6	Analyze test instrument validity and reliability
8	1.177	0.761	9.2.8	Use computer to assist in analyzing test results

Rank Order	Median (mdn)	IQR	Code	Tasks
4	3.149	2.053	9.3	Administer evaluative experiences.
1	4.181	1.595	9.3.3	Administer written and manipulative performance tests
2	3.300	1.503	9.3.2	Conduct student self-evaluation procedures
3	3.062	2.350	9.3.4	Maintain a daily instructional evaluation log book
4	2.833	1.673	9.3.1	Administer pretests and posttests
5	2.166	2.081	9.3.5	Administer standardized tests

Rank Order	Median (mdn)	IQR	Code	Tasks
10	2.710	1.774	8.0	UTILIZE REAEARCH
1	3.490	1.843	8.1	Identify needs (problems) amenable to research.
1	4.166	1.527	8.1.2	Identify causes and unfulfilled needs which contribute to classroom problems
2	3.733	1.579	8.1.4	Review available research applicable to identified problem
3	3.062	2.388	8.1.3	Estimate and evaluate factors such as time, cost and value as a basis for selection of a research problem
4	2.947	1.139	8.1.1	Develop an awareness of the need for solving educational problems through research
2	3.089	1.651	8.7	Apply decision-making process to the solution of instructional problems.
1	3.285	1.357	8.7.2	Make decisions on courses of action to be taken based on research evidence
2	3.218	1.473	8.7.3	Take action based on decision from research evidence
3	3.115	1.666	8.7.1	Analyze potential courses of action applicable to needs (problems) as suggested by research results
4	2.666	1.743	8.7.4	Evaluate action taken based on research findings
3	2.963	1.439	8.5	Cooperate in research effort of others.
1	3.470	1.382	8.5.1	Assist in implementation and evaluation of innovative programs
2	2.789	1.303	8.5.2	Assess and respond to educational research instruments
3	2.666	1.444	8.5.3	Organize and set-up pilot programs in cooperation with other researchers
4	2.707	1.637	8.6	Read and interpret research findings both as a consumer and as a researcher.
1	3.366	1.333	8.6.7	Determine potential application and usefulness of research findings to his own situation
2	2.886	1.156	8.6.5	Review the analysis of research data
3	2.735	1.965	8.6.4	Assess the validity and reliability of research procedures
4	2.466	1.433	8.6.1	Read the research report and identify the major parts
5	2.464	1.348	8.6.2	Inspect research reports for adequate descriptions of the major elements of the research study
6	2.458	1.993	8.6.6	Evaluate the conclusions of a research report
7	2.250	1.857	8.6.3	Evaluate the sampling procedures of research reports

Rank Order	Median (mdn)	IQR	Code	Tasks
5	2.467	1.613	8.3	Conduct proposed research.
1	2.700	1.764	8.3.3	Draw conclusions and project implications based on analysis of research data
2	2.571	1.626	8.3.1	Collect research data by appropriate methods, e.g., historical, descriptive, experimental
3	2.366	1.606	8.3.2	Analyze and interpret data collected for research studies
6	2.375	1.849	8.2	Prepare proposals for researching a problem.
1	2.973	1.625	8.2.6	Select or develop an instrument appropriate to a researchable problem
2	2.666	2.042	8.2.8	Prepare a budget estimate in fiscal terms for a research study
3	2.633	1.333	8.2.3	Formulate objectives or hypotheses to be answered through research study
4	2.533	1.691	8.2.4	Select and describe the research design to be used in a proposed research study
5	2.250	1.806	8.2.9	Submit research proposal to appropriate funding bodies
6	2.200	2.158	8.2.1	Develop a concise statement of the research problem
7	2.038	1.597	8.2.7	Develop a management strategy for the control of the research study
8	1.944	1.850	8.2.5	Select a population for a particular research study
9	1.821	1.466	8.2.2	Write a rationale for a research study including a review of literature
7	1.855	1.726	8.4	Write research reports.
1	2.115	1.722	8.4.3	Complete final draft of research report
2	1.909	1.608	8.4.1	Complete preparation of preliminary draft of research report, e.g.: introduction, methods, body, conclusions, implications, bibliography, appendices
3	1.425	1.662	8.4.2	Formally review and revise preliminary draft of research report